

AMENDMENTS TO THE CLAIMS

Claims 1-38 (canceled)

39. (Currently Amended) A telephone for transmitting ~~a first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a second downlink signal from the base station, comprising:

- a modulator operable to modulate a ~~first~~ data stream according to ~~an m-level QAM~~ a QPSK to produce a modulated signal;

- a transmitter operable to transmit the modulated signal as the ~~first transmission~~ uplink signal;

- a receiver operable to receive the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of a ~~second~~ first data stream and the second downlink signal has information of a second ~~a third~~ data stream, the ~~second data stream~~ first downlink signal is modulated according to ~~an m-level QAM~~ a QPSK and the second downlink signal is scrambled and, ~~the third data stream~~ is modulated according to an n-level QAM or an n-level PSK, and wherein the second ~~first~~ data stream has ~~includes~~ information representing the value of n; and

- a descrambler operable to descramble the second downlink signal to produce a descrambled second downlink signal;

- a demodulator operable to demodulate the ~~second transmission~~ first downlink signal to produce ~~the second~~ a demodulated first data stream and demodulate the descrambled second downlink signal to produce a demodulated second ~~the third~~ data stream, wherein the ~~third~~ demodulated second data stream is produced according to the information value of n; ~~obtained from the second data stream~~

- a first error correction code (ECC) decoder operable to ECC decode the demodulated first data stream to produce the first data stream; and

- a second error correction code (ECC) decoder operable to ECC decode the demodulated second data stream to produce the second data stream;

wherein a coding scheme of the first ECC decoder is different from a coding scheme of the second ECC decoder, and wherein a second error correction code rate is changeable.

40. (Canceled).

41. (Previously Presented) A telephone according to claim 39, wherein n is an integer and equal to or greater than 4.

42-47. (Canceled).

48. (Currently Amended) A telephone for transmitting ~~a first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a second downlink signal from the base station, comprising:

- a modulator operable to modulate a ~~first~~ data stream according to ~~an m-level QAM~~ a QPSK to produce a ~~first~~ modulated signal;

- a multiplexer operable to convert the ~~first~~ modulated signal to a CDMA converted signal according to CDMA;

- a transmitter operable to transmit the CDMA converted signal as the ~~first transmission~~ uplink signal;

- a receiver operable to receive the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of a ~~second~~ first data stream and the second downlink signal has information of a second ~~a third~~ data stream, the ~~second data stream~~ first downlink signal is modulated according to ~~an m-level QAM~~ a QPSK and the ~~third data stream~~ second downlink signal is scrambled and modulated according to an n-level QAM or an n-level PSK, wherein and the second first data stream has includes information representing the value of n;

- a de-multiplexer operable to convert the ~~second transmission~~ first downlink signal to a ~~second modulated de-multiplexed first downlink signal~~ and convert the second downlink signal to a de-multiplexed second downlink signal, according to CDMA; and

- a descrambler operable to descramble the de-multiplexed second downlink signal to produce a descrambled second downlink signal;

- a demodulator operable to demodulate the ~~second modulated de-multiplexed first downlink~~ signal to produce ~~the second~~ a demodulated first data stream and demodulated the descrambled second downlink signal to produce a demodulated second ~~the third~~ data stream, wherein the ~~third demodulated second~~ data stream is produced according to the information value of n; ~~obtained from the second data stream~~

- a first error correction code (ECC) decoder operable to ECC decode the demodulated first data stream to produce the first data stream; and

- a second error correction code (ECC) decoder operable to ECC decode the demodulated second data stream to produce the second data stream;

wherein a coding scheme of the first ECC decoder is different from a coding scheme of the second ECC decoder, and wherein a second error correction code rate is changeable.

49. (Canceled).

50. (Previously Presented) A telephone according to claim 48, wherein n is an integer and equal to or greater than 4.

51-74. (Canceled).

75. (Currently Amended) A transmission and receiving method for transmitting ~~a first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a second downlink signal from the base station, comprising:

when the uplink signal is transmitted from a telephone to the base station:

- modulating a ~~first~~ data stream according to ~~an m-level QAM~~ a QPSK to produce a modulated signal; and

- transmitting the modulated signal as the ~~first transmission~~ uplink signal; and

when the first and second downlink signals are transmitted from the base station to the telephone:

- receiving the ~~second transmission~~ first downlink signal and the ~~second downlink~~ signal, wherein the ~~second transmission~~ first downlink signal has information of a ~~second~~ first data stream and the second downlink signal has information of a second ~~a third~~ data stream, the ~~second data stream~~ first downlink signal is modulated according to ~~an m-level QAM~~, ~~the third data stream is a QPSK~~ and the second downlink signal is scrambled and modulated according to an n-level QAM or an n-level PSK, and wherein the second first data stream has includes information representing the value of n; and

- descrambling the second downlink signal to produce a descrambled second downlink signal; and

- demodulating the ~~second transmission~~ first downlink signal to produce ~~the second~~ a demodulated first data stream and ~~the third~~ demodulating the descrambled second downlink signal to produce a demodulated second data stream, wherein the ~~third demodulated second~~ data stream is produced according to the information value of n ~~obtained from the second data stream~~.

76. (Canceled).

77. (Previously Presented) A transmission and receiving method according to claim 75, wherein n is an integer and equal to or greater than 4.

78-83. (Canceled).

84. (Currently Amended) A transmission and receiving method for transmitting ~~a first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a second downlink signal from the base station, comprising:

when the uplink signal is transmitted from a telephone to the base station:

- modulating a ~~first~~ data stream according to ~~an m-level QAM~~ a QPSK to produce a ~~first~~ modulated signal;
- multiplexing ~~converting~~ the ~~first~~ modulated signal to produce a CDMA converted signal according to CDMA; and
- transmitting the CDMA converted signal as the ~~first transmission~~ uplink signal; and

when the first and second downlink signals are transmitted from the base station to the telephone:

- receiving the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of a ~~second~~ first data stream and the second downlink signal has information of a second ~~a third~~ data stream, the ~~second data stream~~ first downlink signal is modulated according to ~~an m-level QAM~~, ~~the third data stream is a QPSK~~ and the second downlink signal is scrambled and modulated according to an n-level QAM or an n-level PSK, and wherein the second first data stream has includes information representing the value of n;
- de-multiplexing the first downlink ~~converting the second transmission~~ signal to produce a second modulated de-multiplexed first downlink and de-multiplexing the second downlink signal to produce a de-multiplexed second downlink signal, according to CDMA; and
- descrambling the de-multiplexed second downlink signal to produce a descrambled second downlink signal;
- demodulating the ~~second modulated~~ de-multiplexed first downlink signal to produce ~~the second~~ a demodulated first data stream and demodulating the descrambled second downlink signal to produce a demodulated second ~~the third data~~

stream, wherein the ~~third~~ demodulated second data stream is produced according to the ~~information value of n ; obtained from the second data stream~~
- performing first error correction code (ECC) decoding of the demodulated first data stream to produce the first data stream; and
- performing second error correction code (ECC) decoding of the demodulated second data stream to produce the second data stream;
wherein a coding scheme of the first ECC decoding is different from a coding scheme of the second ECC decoding, and wherein a second error correction code rate is changeable.

85. (Canceled).

86. (Previously Presented) A transmission and receiving method according to claim 84, wherein n is an integer and equal to or greater than 4.

87-110. (Canceled).